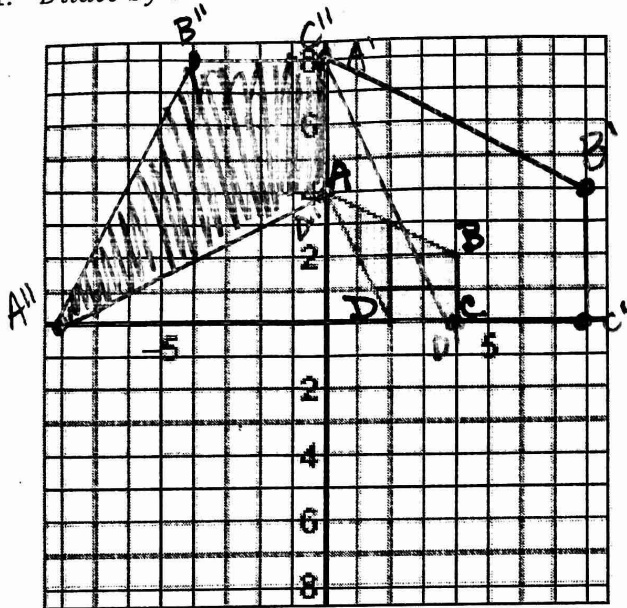


- Perform the series of transformations described to create the final image.
- Graph each figure. Be sure to shade ONLY the final image.
- State if the image is congruent or similar to pre-image.

1. Dilate by  $c = 2$  and rotate  $90^\circ$  counterclockwise

Pre-Image



$A(0,4)$   
 $B(4,2)$   
 $C(4,0)$   
 $D(2,0)$

$(2x, 2y)$   
 Image 1

$A'(0,8)$   
 $B'(8,4)$   
 $C'(8,0)$   
 $D'(4,6)$

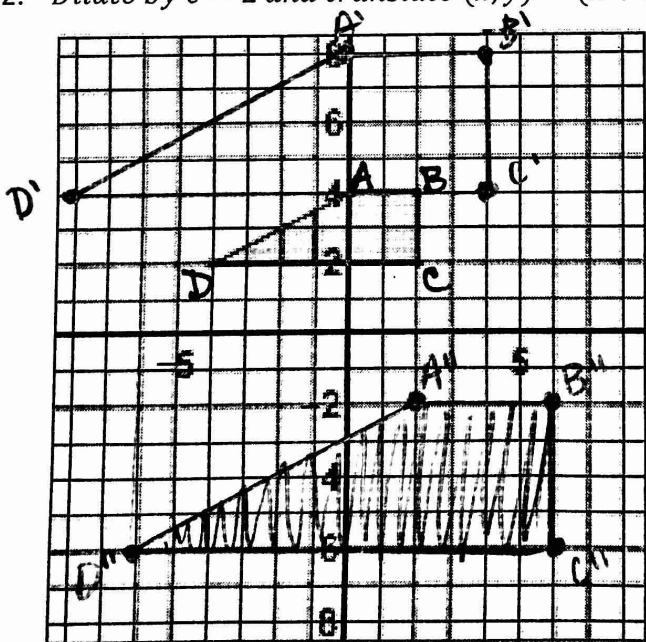
$(-y, x)$   
 Image 2

$A''(-8,0)$   
 $B''(-4,8)$   
 $C''(0,8)$   
 $D''(0,4)$

The image is CONGRUENT or SIMILAR to the pre-image.

2. Dilate by  $c = 2$  and translate  $(x, y) \rightarrow (x + 2, y - 10)$

Pre-Image



$A(0,4)$   
 $B(2,4)$   
 $C(2,2)$   
 $D(-4,2)$

$(2x, 2y)$   
 Image 1

$A'(0,8)$   
 $B'(4,8)$   
 $C'(4,4)$   
 $D'(-8,4)$

(right 2, down 10)  
 Image 2

$A''(2,-2)$   
 $B''(6,-2)$   
 $C''(6,-6)$   
 $D''(-6,-6)$

The image is CONGRUENT or SIMILAR to the pre-image.

Dilate by  $c = \frac{1}{2}$ , rotate  $180^\circ$ , translate  $(x, y) \rightarrow (x - 4, y + 6)$

Pre-Image

$(\frac{1}{2}x, \frac{1}{2}y)$

Image 1

$(-x, -y)$

Image 2

(left 4, up 6)

Image 3

$A(0, 4)$

$A'(0, 2)$

$A''(0, -2)$

$A'''(-4, 4)$

$B(4, 2)$

$B'(2, 1)$

$B''(-2, -1)$

$B'''(-6, 5)$

$C(4, 0)$

$C'(2, 0)$

$C''(-2, 0)$

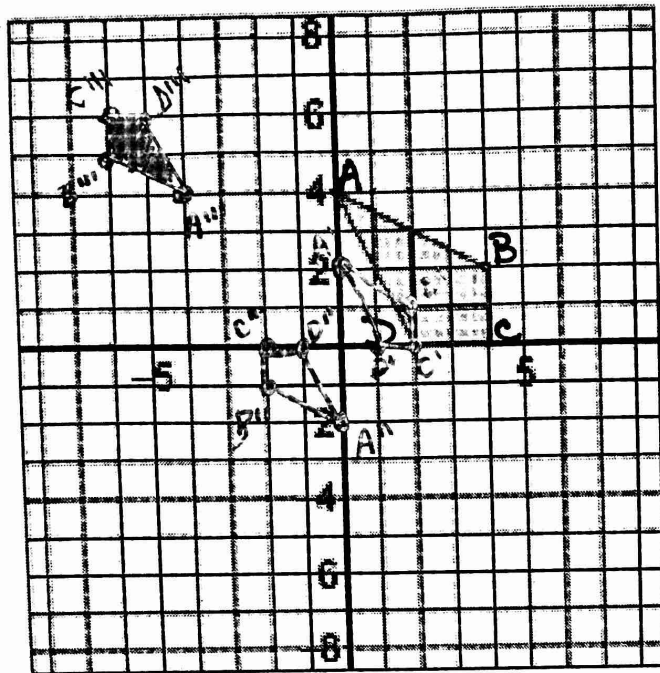
$C'''(-6, 6)$

$D(2, 0)$

$D'(1, 0)$

$D''(-1, 0)$

$D'''(-5, 6)$



The image is CONGRUENT or SIMILAR to the pre-image.